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Claim 1 (currently amended): A system for demonstrating signal cascades that occur in certain cells when certain stimuli are introduced, comprising:

- (a) a dynamic database ~~ofcomprising definitions relating to known cellular components, and reactions and concepts;~~ and
- (b) an inference engine for generating signal cascades,

wherein the inference engine is linked to the dynamic database.

Claim 2 (currently amended): The system of claim 1, wherein the dynamic database further comprises concepts, events and attributes.

*a.*  
Claim 3 (original): The system of claim 2, wherein said concepts are adapted to inherit from other concepts.

Claim 4 (original): The system of claim 2, wherein said concepts contain other concepts.

Claim 5 (original): The system of claim 2, wherein said concepts exclude other concepts.

Claim 6 (original): The system of claim 2, wherein said concepts are capable of joining other concepts.

Claim 7 (original): The system of claim 2, wherein said concepts are associated with said attributes.

Claim 8 (currently amended): The system of claim 2, wherein said attributes comprise indicia of size, shape, color, location of a graphic, time, or species.

Claim 9 (currently amended): The system of claim 2, wherein said dynamic database comprises signal transduction information.

Claim 10 (currently amended): The system of claim 2, wherein said dynamic database comprises pathology information.

Claim 11 (currently amended): The system of claim 2, wherein said dynamic database comprises information specific to chemical areas.

Claim 12 (original): The system of 11, wherein said information comprises signal transduction information on plant cellular environments or animal cellular environments.

*Q1*  
Claim 13 (currently amended): The system of claim 1, wherein the dynamic database comprises data for binding constants, rate equations, reactant concentrations, primary sequences of functional sites in biomolecules or proteins, or efficacy of physical interactions with binding partners.

Claims 14-56 (withdrawn)

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